



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,194	10/19/2001	Sherman (Xuemin) Chen	47139/JEJ/B600	2290
23363	7590	06/25/2004	EXAMINER	
CHRISTIE, PARKER & HALE, LLP			SENF, BEHROOZ M	
PO BOX 7068			ART UNIT	
PASADENA, CA 91109-7068			PAPER NUMBER	

2613

DATE MAILED: 06/25/2004

3

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/045,194

Applicant(s)

CHEN ET AL.

Examiner

Behrooz Senfi

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18, 21-38, 41-43, 46-48 and 51 is/are rejected.
- 7) ☒ Claim(s) 19, 20, 39, 40, 44, 45, 49 and 50 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/24/02
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 18, 21 – 38, 41 – 43, 46 – 48 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al (US 6,618,443) in view of Takahashi et al (US 6,393,152).

Regarding claim 1, Kim '443 teaches, "a video decoding system for receiving a digital bit stream and decoding" (i.e. fig. 2), and "a video decoder for decoding the digital bit stream ....." (i.e. fig. 2), and "memory comprising a plurality of buffers, the picture being stored in a buffer ....." (i.e. fig. 2, memory 222), and "recovery means" (i.e. fig. 2, decoder, col. 3, lines 65 – 67). Kim '443 fails to explicitly teach, "identification flag". However, such features are well known and used in the prior art of the record as evidenced by Takahashi '152 (i.e. col. 32, lines 24 - 55) where the identification flag corresponds to I frame, which eventually would be converted to a lower resolution, resulting reducing the picture size. Therefore, taking the combined teaching of Kim '443 and Takahashi '152 as a whole, it would have been obvious to modify and improve the coding system of Kim '443 as taught by Takahashi '152 for more efficient encoding and decoding.

Regarding claims 2 – 5 and 22 – 25, combination of Kim '443 and Takahashi '152 teaches, "flag is armed when picture is I-picture, P-picture, B-picture) (i.e. col. 19, lines 43 – 50 of Takahashi).

Regarding claim 6 – 9, 26 - 29 the limitations claimed "pictures comprises field/frames" would have been obvious in the MPEG based processing.

Regarding claim 11, combination of Kim '443 and Takahashi '152 teaches, "picture comprises HDTV ....." (i.e. fig. 2 of Kim).

Regarding claims 10 and 30, the claimed "progressive refreshment ....." reads on MPEG, MPEG provides progressive refreshment of picture data, and it is known that the p-picture refreshment is with respect to previous p-picture as a reference or the I-frame.

Regarding claims 12 – 13, 32 and 33, combination of Kim '443 and Takahashi '152 teaches, "picture data comprises half-vertical resolution and half-horizontal resolution" (i.e. col. 1, lines 55 – 58 of Takahashi).

Regarding claims 14, 15, 34 and 35, combination of Kim '443 and Takahashi '152 teaches, "video decoding system and means for converting" (i.e. col. 15, lines 60+ of Takahashi).

Regarding claims 16 and 36, combination of Kim '443 and Takahashi '152 teaches, "block-based image compression to compress picture in spatial domain ....." (i.e. col. 2, lines 26 – 35 of Kim).

Regarding claims 17, 18, 37, 38, 42, 43, 47 and 48, the limitation claimed "DPCM, and compression algorithm is accomplished by using a dynamic range of

Art Unit: 2613

prediction residues for each block ..... in claim 18 and 38), reads on MPEG, since MPEG is a specific kind of DPCM algorithm, and takes the differences between the images which would save the number of bits.

Regarding claims 21, 31 and 41, the limitations claimed are substantially similar to claim 1, therefore, the grounds for rejecting claim 1 also applies here.

Regarding claims 46, 51 the limitations claimed are substantially similar to claim 1, therefore the grounds for rejecting claim 1 also apply here. Furthermore, DPCM (MPEG) is capable of providing gain adaptive compression algorithm.

#### ***Allowable Subject Matter***

3. Claims 19, 20, 39, 40, 44, 45 and 49 – 50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is an examiner's statement of reasons for allowance: the prior art of the record fails to disclose or rendered obvious the conditional limitations of "using Lloyd algorithm" as expressed in fig. 9.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Behrooz Senfi** whose telephone number is

Application/Control Number: 10/045,194  
Art Unit: 2613

Page 5

**(703)305-0132.**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Chris Kelley** can be reached on **(703)305-4856**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**Or faxed to:**

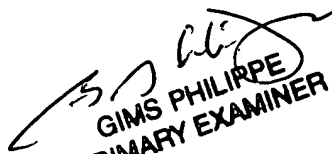
**(703) 872-9314**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relative to the status of the application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

B. S. R. S.

6/15/2004

  
GIMS PHILIRPE  
PRIMARY EXAMINER